

REMARKS

Claims 1-24 are pending. Claim 1 has been amended. In view of the following, all pending claims are in condition for allowance. If, after considering this response, the Examiner does not agree that all of the claims are allowable, then the Examiner is requested to schedule a teleconference with the Applicants' attorney to further the prosecution of the application.

Objection to the drawings

On page 2 of the office action, the Examiner states that "the two outputs for the control logic in claim 11 must be shown." However, it should be noted that claim 11 does not recite "control logic." Therefore, this objection should be withdrawn.

On page 3 of the office action, the Examiner objects to Figure 14. However, it should be noted that Figure 14 does not exist in the present application. Therefore, this objection should be withdrawn.

Objection to claims 1 and 11-18

Claim 1 has been amended to correct informalities.

The Examiner states that it is difficult for the Examiner to determine the elements of claims 11-18. These claims are explained below.

Rejection of claims 1-9 and 15 under 35 U.S.C. 112, second paragraph

Claim 1 has been amended to correct antecedent basis.

As explained below, claim 15 is not incomplete for omitting essential structural cooperative relationships of elements.

Rejection of claims 1-2 and 10-24 under 35 U.S.C. 102(e) as being anticipated by Knierim et al. (US 2004/0145420)

Claim 1

Claim 1 recites means for calculating a correction value accumulating the incremental value.

For example, referring, e.g., to FIGS. 1a and 2 of the present application, means 125, 315 calculates a correction value N_c accumulating the incremental value $K-Mx[n]$. It should be noted that by definition, the accumulator 315 comprises an adder in a feedback configuration for accumulating the received incremental value $K-Mx[n]$.

Knierim, on the other hand, does not disclose means for calculating a correction value accumulating the incremental value. Instead, Knierim discloses a summing circuit 250 that is a simple adder (FIG. 2; paragraphs [0018] – [0023]). The simple adder 250 merely restores the average divide ratio provided to the pre-scaler 275 when the value N for the modulator 280 is reduced (to limit the number of bits required to represent the sequence X). However, all this has nothing to do with accumulating the incremental value to calculate a correction value. In fact, after reviewing Knierim in its entirety, the Applicants' attorney is unable to find any mention of an accumulator as defined in the art. Therefore, Knierim does not satisfy the limitations of claim 1.

Claim 10

Claim 10 is patentable for reasons similar to those recited above in support of the patentability of claim 1.

Claim 11

For example, referring, e.g., to FIGS. 2-3 of the present application, a control circuit 125 is operable to receive a first data set $x[n]$, produce a phase-error value $\Sigma(K-Mx[n])$ from the first data set, and produce a second data set N_c from the phase-error value. A generator 130 is coupled to the control circuit 125 and is operable to generate a compensation signal I_c corresponding to the second data set N_c .

Knierim, on the other hand, does not satisfy the limitations of claim 11. On page 5 of the office action, the Examine interprets comparator 210 in FIG. 2 as the control circuit. However, comparator 210 simply compares two input frequencies and produces a single error signal. After reviewing Knierim in its entirety, the Applicant's attorney is unable to find any mention of the comparator 210 producing a phase-error value from a first data set, and then producing a second data set from the phase-error value.

Claims 19 and 23-24

Claims 19 and 23-24 are patentable for reasons similar to those recited above in support of the patentability of claim 11.

Claims 2, 12-18 and 20-22

Claims 2, 12-18 and 20-22 are patentable by virtue of their respective dependencies from claims 1, 11 and 19.

In order to assist the Examiner, claims 13-18 are explained as follows:

Claim 13: For example, a control circuit 125 comprises a first modifier 310 operable to convert the first data set $x[n]$ into a third data set $K-Mx[n]$.

Claim 14: For example, a control circuit 125 further comprises a second modifier 315 coupled to the first modifier 310, the second modifier 315 operable to convert the third data set $K-Mx[n]$ into the phase-error value $\Sigma(K-Mx[n])$.

Claim 15: For example, a control circuit 125 further comprises a third modifier 320 couple to the second modifier 315, the third modifier 320 operable to convert the phase-error value $\Sigma(K-Mx[n])$ into the second data set N_c .

Claim 16: For example, a generator 130 comprises a first modifier 405 operable to convert the second data set N_c into a third data set $p_0 \dots p_{15}$ (or $n_0 \dots n_{15}$).

Claim 17: For example, a generator 130 further comprises a second modifier 410 coupled to the first modifier 405, the second modifier 410 operable to convert the third data set $p_0 \dots p_{15}$ (or $n_0 \dots n_{15}$) into a fourth data set $sp_0 \dots sp_{15}$ (or $sn_0 \dots sn_{15}$).

Claim 18: For example, a generator 130 further comprises a third modifier 415 coupled to the second modifier 410, the third modifier 415 operable to convert the fourth data set $sp_0 \dots sp_{15}$ (or $sn_0 \dots sn_{15}$) into the compensation signal I_c .

Rejection of claim 3 under 35 U.S.C. 103(a) as being unpatentable over Knierim in view of Melanson et al. (US 2003/0151535)

Claim 3 is patentable by virtue of its dependency from claim 1.

**Rejection of claims 5 and 6 under 35 U.S.C. 103(a) as being unpatentable over
Knierim in view of Kim et al. (US 2005/0185491)**

Kim has a priority date of February 19, 2004, which is after the priority date of the present application (March 14, 2003). Therefore, Kim is not prior art and this rejection should be withdrawn.

CONCLUSION

In light of the foregoing, claims 1-24 are in condition for allowance, which is respectfully requested.


In order to consider this response timely, applicant submits herewith a Petition for Extension of Time (three months). Applicant submits that this response has not generated any additional claim fees. However, if the Examiner determines that additional fees are necessary, he is authorized to charge them to deposit account number 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner schedule a phone interview with the Applicants' attorney at (425) 455-5575.

Dated this 22nd day of October, 2007.

Respectfully submitted,

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